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ABSTRACT

"Te Ngahere, The Forest" is a kit comprised of a teacher's guide, activity cards, a resource book, a poster, and a picture pack to inform New Zealand students of forest and forestry in New Zealand. This document reports results of a mail survey to determine the number of teachers and schools with knowledge of the kit, the extent of that knowledge, the use of the kit, and the method in which teachers heard about the kit. Of the teachers surveyed in a stratified random sample of teachers in the country's 11 education districts, 66% of the primary and 47% of the secondary teachers responded. Conclusions from the primary teacher survey were that the response to the kit was acceptable, the teachers were positive about the kit content and format, the kit is used differently from intended use, and the impact on the students could not be ascertained. Conclusions from the secondary teacher survey include that the picture was not clear, the use of the kit is less widespread than among primary teachers, the teacher response of those who used the kit was positive, teachers appear to use the kit for less time, and the kit was most often used in science classes. Appendices contain copies of the primary and secondary surveys; a comparison of national and sample school characteristics; comparisons of primary and secondary response samples and national characteristics; responses to primary open-ended questions; and responses to secondary open-ended questions. (MDH)

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The Use of *The Forest* Kit in Schools

A Report by
Jacky Burgon and Sally Boyd

NZCER - promoting quality education for New Zealanders through research and resources; information and advice.

New Zealand Council for Educational Research
Wellington
1993.

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INTRODUCTION

In early 1992 a new curriculum resource was introduced into all primary and secondary schools in New Zealand. This new resource is presented in kit form, and is entitled **Te Ngahere, The Forest**. (This is referred to as **Te Ngahere**, or "the kit" in the text of this report). Its purpose is to inform New Zealand students of forests and forestry in New Zealand; the basic concepts of both plantation and indigenous forests and their roles in society, different kinds of trees, how trees grow, the economics of forestry, the relationship between geography and forestry, forestry planning, and the chemical cycles associated with trees. There are 5 different kits for 5 different levels of schooling: juniors; standards; intermediate; lower secondary; and upper secondary. Further components will be added to each of the kits over the next few years. The themes for these additional resources will be: Processes; the Environment; the Human Dimension; and Science, Technology, and Machinery.

In the primary sector the core pack of each kit comprises a Teachers' Guide, activity cards, a resource book Helping Hands (a guide to contacts and further forestry related resources), a poster, and a picture pack. The secondary sector kits contain separate booklets for Geography/Social Studies, Economics, Science, and Design and Technology, along with Helping Hands, a poster, and a video.

The **Forest Industries Council**, supporter of **Te Ngahere, The Forest,** was interested in ascertaining the extent of teachers' knowledge about the new resource and the extent and type of usage of the kit, particularly since the project is to have a number of subsequent phases. Inquiries were made of NZCER regarding evaluation of the resource, and after further discussions NZCER was contracted to the **Forest Industries Council** to determine, by postal survey, the following:

* the number of teachers and schools with some knowledge of **Te Ngahere, The Forest**
* the extent of knowledge about **Te Ngahere, The Forest**
* the extent and nature of the use of the kit
* the manner in which teachers heard about the kit.

A postal survey of teachers is a time- and cost-efficient way of gathering a national picture of the place of **Te Ngahere, The Forest** in the current school curriculum. Given that it is a

postal survey however, the extent and type of use revealed gives a broad overview, rather than an in-depth analysis, of the manner in which the kit is actually used in various curriculum areas. At the same time that this postal survey was planned, the possibility of a second phase of research was also discussed, in which the use made of the kit by a smaller number of schools would be examined in depth, but no further plans have been made at this stage.

METHODOLOGY

Sampling

As already indicated in the introduction, the method of data collection was that of a postal survey. Standard procedure in postal survey design when large numbers are involved (there are some 3,000 primary and secondary schools in New Zealand and many more teachers) is to select a smaller sample from the total group to survey. When such a sample is selected, the crucial issue is whether or not the reported findings of that sample can be generalised to the larger group (in this case, all primary and secondary teachers). In other words, is the sample chosen representative of all teachers in New Zealand? Simple random sampling is a method by which samples can be selected which *are* representative of the larger population. If this method were to be used, then each school in New Zealand would have an equal chance of being chosen for the survey. However, in this survey we are interested in a sample of *teachers* rather than schools, and, since many schools are small, sampling of schools on a simple random basis alone would lead to a skew in the teacher sample. The fact that a much larger proportion of teachers teach in larger schools means that a simple random sample of schools would give an unclear picture as to teacher use of **Te Ngahere** in larger schools. Accordingly, what is known as a stratified random sample has been used. This means that random samples were drawn from each of the country's 11 education districts, after each school was given a weighting to ensure that larger schools had a greater chance, proportionate to their size, of being chosen. For primary schools a 10% sample was considered robust, giving a final combined sample of 232 primary and intermediate schools. (This 10% sample has been used in a number of national surveys of schools and teachers, for example **The Impact of Tomorrow's Schools in Primary Schools and Intermediates** (Wylie, 1989,1990, and 1991, NZCER), used this level of sampling). The credence placed on the representativeness of a survey depends not only on sampling methods but also on the response rate from those

sampling methods. Response rates from the survey will be discussed in the section on results. The original sample matched reasonably well the distribution of primary and secondary schools throughout the country, with the Auckland region having a greater number of schools sampled because of the proportionately larger population of the region, and higher number of larger schools, which means a higher number of teachers. Fewer schools were sampled in regions such as Northland, Otago, and Southland, since they have smaller populations of students and therefore teachers. Table 1 gives a breakdown by district of the primary and intermediate schools chosen for the survey.

Table 1
Number of Primary Schools Chosen by District

District	% of schools nationally	% of schools in sample	no. of schools in sample (N = 232)
Northland	6.0	4.0	10
Auckland	17.0	29.0	67
Waikato	11.0	10.0	23
Bay of Plenty	6.5	8.0	19
Central West	11.5	10.0	23
Central East	9.0	6.5	15
Central South	9.5	11.0	26
Malb/Nelson/Westland	6.0	3.0	8
Canterbury	12.0	10.5	24
Otago	6.5	4.5	10
Southland	5.0	3.5	7

The secondary sample posed slightly different problems, since a 10% sample gave a smaller total number of schools from which to analyse teacher response, as there are only 403 secondary schools, compared with 2,400 primary schools. If the response rate were low, we would be left with too small a number of questionnaires for analysis. Accordingly, a 15% sample was chosen from the secondary sector. Additionally, to gain a fuller picture of teachers' attitudes to the regional launches of the kit that had taken place throughout the country in early 1992, schools in 2 regions who had attended the launch were sent the secondary questionnaires. This gave a final school sample size of 79; 65 being the 15% sample, with an additional 14 schools in Auckland and Westland being added because they had attended the launch. Again, since there are more teachers in larger secondary schools, our sample was selected to ensure that there was adequate representation of teachers in larger schools. Differences between the national distribution of *schools* and our sample distribution are due to our sampling of *teachers* and not schools. Table 2

shows the sample distribution for secondary schools.

Table 2
Number of Secondary Schools Chosen by District
(Figures in brackets refer to additional launch sample)

District	% of schools nationally	% of schools in sample *	no. of schools in sample (N = 65 + 14)
Northland	6.0	3.0	2
Auckland	20.5	27.5	18 (8)
Waikato	9.0	8.0	5
Bay of Plenty	6.0	6.0	4
Central West	9.0	12.5	8
Central East	7.0	4.5	3
Central South	12.0	11.0	7
Malb/Nelson/Westland	6.0	6.0	4 (6)
Canterbury	14.0	15.5	10
Otago	6.5	4.5	3
Southland	4.0	1.5	1

(* Percentages do not include additional launch sample)

Other characteristics that would also be considered important if we were sampling *schools* rather than *teachers*, are roll size, and school type, and whether the school was integrated, private, or state. Since we sought to sample teachers, we have a higher proportion of large schools than there are nationally, and more intermediates than would be expected if we were sampling schools rather than teachers. For those who have an interest in the breakdown of schools from which teachers came according to size, type, and ownership, Appendix C contains this information.

When comparing the national characteristics to the sample characteristics, some differences are evident in the distributions. However, we are satisfied that these differences can be explained by our intention to sample teachers rather than schools, and we are confident that the sample drawn is representative of the national distribution of teachers.

Once the schools have been selected, there is of course a second question in relation to selecting the sample; which teachers within those schools ought to be sampled? After discussions with the Project Manager of **Forestry Insights**, and perusal of the structure of the kits, it became clear that different procedures needed to be followed for primary and secondary levels. At the primary level the questions were about general use by teachers throughout the school, and teachers' knowledge of the kit at the three levels: junior, standards and intermediate. Accordingly the

principal of each school in the primary and intermediate sample was asked to complete a one-page questionnaire about the extent of use by teachers within the school, and additionally was asked to pass the full questionnaire to one teacher on his or her staff. To ensure that the views of teachers were representative of the 3 levels of primary schooling, one-third of principals were requested to pass on the questionnaire to a teacher at the junior level, one-third to a teacher in the standards, and one-third to a teacher in the intermediate section. Again, after discussion, it was decided that maximum information would be gained if the principal were to pass the full questionnaire on to a teacher who was familiar with the resource at the particular level specified. However, if this was not possible, the principal was requested to hand it to a teacher at the specified level, even if that teacher was not familiar with the resource. While we were conscious that this would give a slightly inflated picture of teacher knowledge in the primary sector, this information would be tempered by information gained from the principals' questionnaires regarding school-wide use.

In the secondary sector, the kit is structured to be used by 4 different departments, Geography, Science, Economics, and Design and Technology, and the contents are designed to be housed in those 4 different departments. The crucial question was, therefore, were each of those departments aware of the resource and/or using it? Accordingly in the secondary sample, the heads of those 4 departments were chosen as the target within each school.

Due to the schedule of the contractors, who required information prior to the launch of Phase Two of the kit, this survey was undertaken later in the school year than is ideal; questionnaires were dispatched at the end of October. To encourage a reasonable response rate an incentive was offered to schools returning their questionnaires by the appointed time; a small gift, either a **Te Ngahere** poster or one of a selection of NZCER publications was offered. Two follow-up letters were sent to primary school principals whose schools had not responded by the due date. Principals of secondary schools were reminded by letter and additionally some departments in secondary schools were reminded by fax.

The Questionnaires

Two different questionnaires were developed, one for the primary sector and one for the secondary sector. Both sought demographic information about the school type, roll size, and the level/s at which the respondents taught. The secondary sector was also asked for information about the subject area/s in which the respondent taught. Subsequent questions asked about teachers' familiarity with the resource, and whether or not they had used the kit this

year. If they had not, they were asked why not, and whether they planned to use the resource in subsequent years. Those who had used the kit were asked how they had used it, which parts they had used, and what they thought of it. Those intending to use the kit were asked how they planned to use it. In addition, respondents were asked how they had found out about the kit, and if they or anyone in their school had attended a launch. If they had attended a launch they were asked what they thought of the function, and how the information from the function had been passed on to colleagues on the staff of their school. On a number of issues respondents were able to give more than 1 answer, and accordingly at times the percentages add up to more than 100%. A full copy of the primary questionnaire can be found in Appendix A and a full copy of the secondary can be found in Appendix B.

RESULTS

Since slightly different sampling procedures were followed for primary and secondary schools and since questionnaires were modified for the different levels, primary and secondary, the results of the 2 surveys will be presented separately. Through the primary and secondary results section, response rates are reported as percentages of those answering each questionnaire section *not* as a percentage of the total response sample. This method of reporting response rate was chosen as it reads more logically, since teachers were required to answer different sections of the questionnaire depending on whether they were aware or not aware of the kit, had used or not used the kit, or had attended or not attended a launch. For example, a statement such as "of those who had used the kit in 1992, 60% stated that their students had reacted very well to the kit" means that of the 73 (not the total 153 that replied to the questionnaire) teachers who had used the kit, 44 found their students reacted very well to it.

Primary School Survey

Characteristics of Respondents

The primary school survey was sent to 232 schools (1 teacher in each school); 153 (66%) responded. Such a response rate is acceptable in a postal survey, and can be considered representative of the total population if analysis of the nature of the respondents shows no skew. The first part of the results section therefore describes the characteristics of respondents

in order to determine in what ways the response sample is representative of our sample.

The response rates by school level were comparable: 68% junior, 65% middle, and 63% intermediate.

The highest response rates by district were for the West Coast of the South Island (88%), part of the Marlborough, Nelson, and Westland district, and the central North Island (84%), coinciding with significant areas of plantation forest. The lowest response rate came from the Auckland region (50%) - the largest urban area. Over all, however, differences between response by district and the original sample by district were not significant. Therefore this sample can be seen as representative of our original sample. Table 3 shows the distribution of responses over district in comparison to the original sample distribution.

Table 3
Number of Primary Schools Responding by District

District	% of schools in sample	% of schools responding	no. of schools responding (N = 153)
Northland	4.0	4.5	7
Auckland	29.0	22.0	34
Waikato	10.0	9.0	14
Bay of Plenty	8.0	10.5	16
Central West	10.0	12.0	18
Central East	6.5	6.5	10
Central South	11.0	11.0	17
Malb/Nelson/Westland	3.0	4.5	7
Canterbury	10.5	12.5	19
Otago	4.5	4.0	6
Southland	3.5	3.5	5

Differences between our original sample and the response sample were not significant in the primary survey, therefore valid generalisations can be made from our sample response. A full breakdown of the type and size of respondents' schools can be found in Appendix D.

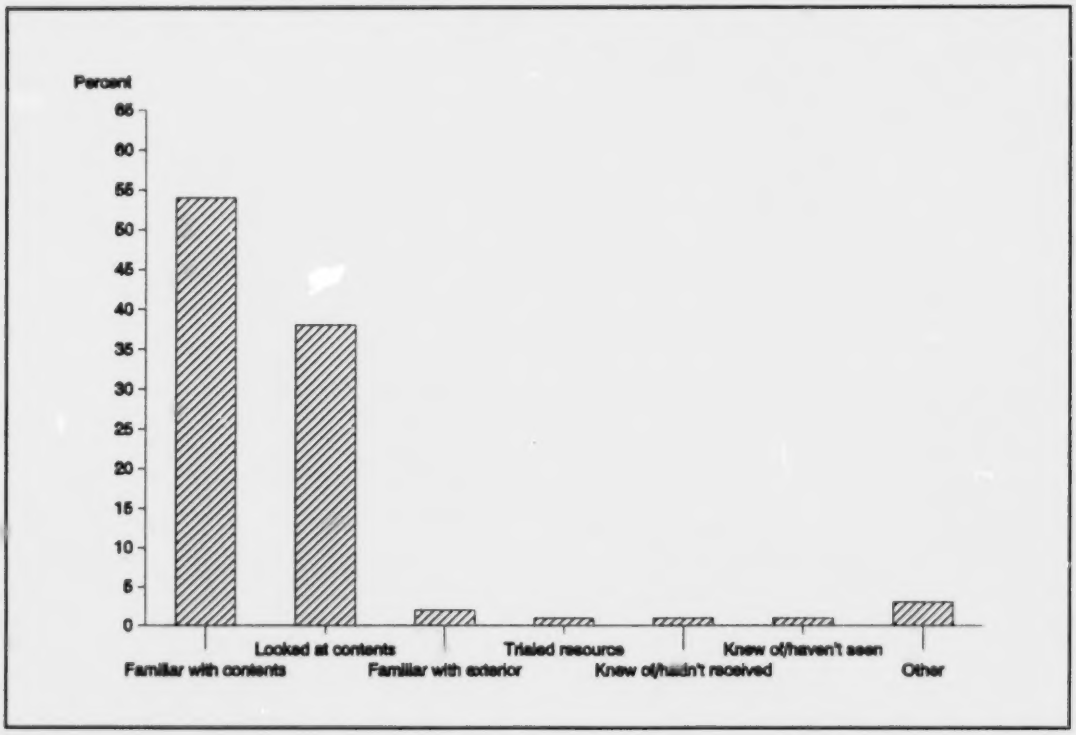
*Knowledge of **Te Ngahere***

When teachers were asked if they were aware of **Te Ngahere**, nearly all of the respondents - 151 (99%) replied they were. Two (1%) were not. Accordingly at least 1 teacher in almost all of the

primary schools was aware of the kit. It should be remembered that the principal was instructed to pass the questionnaire to a teacher at a prescribed level who was aware of the kit; we cannot therefore conclude that 99% of all teachers know about the kit; what we can say is that at least 1 teacher in almost all primary schools is aware of the **Te Ngahere**.

The 151 teachers who were aware of the kit were asked how familiar they were with the resource: 54% stated they were familiar with the contents, 38% had seen the contents, 2% had only seen the exterior of the box, 1% had participated in the resource trial, 3% knew of the kit but had not seen it. Figure 1 shows the teachers' reported level of familiarity with the kit.

Figure 1
Level of Familiarity with Kit



Prevalence of Use in Teaching Programme

The principals were asked in a separate questionnaire whether the kit had been used in their school in 1992. One hundred and forty-two replied, and of these 64% stated that the kit had been used, 30% that it had not, and 4% were not sure. Of the 101 who stated that the kit had been used;

- 51 said that it had been used in less than 25% of the school,
- 23 said that it had been used in 25-50% of the school's classrooms,
- 10 said it had been used in 50-75% of the classrooms,
- 17 said that it had been used in over 75% of the school.

When asked what levels of the kit had been used in their school, 38% of principals noted that the standards level kit had been used, 31% the intermediate, and 23% the junior.

When the teachers who were aware of the kit were asked if they had used the kit in their 1992 teaching programme, 77 teachers (51%) replied no and 73 (48%) replied yes.

Of the 73 teachers who had used the kit, 47% had used the standards level, 42% the intermediate, and 38% the junior. There appears to be no significant differences between prevalence of use across the 3 levels of the primary sector.

Of the 77 who had not used the kit;

- 52% planned to use it next year,
- 35% stated it was not relevant to their programme,
- 27% did not have time in 1992,
- 5% had already completed the work for which the kit would have been relevant,
- 1% would use the kit at the end of 1992,
- 1% were reorganising their resources.

In summary, of the 153 teachers who responded to the questionnaire, 48% have used the kit and 26% are planning to use it, in total 74% or almost three-quarters of the respondents.

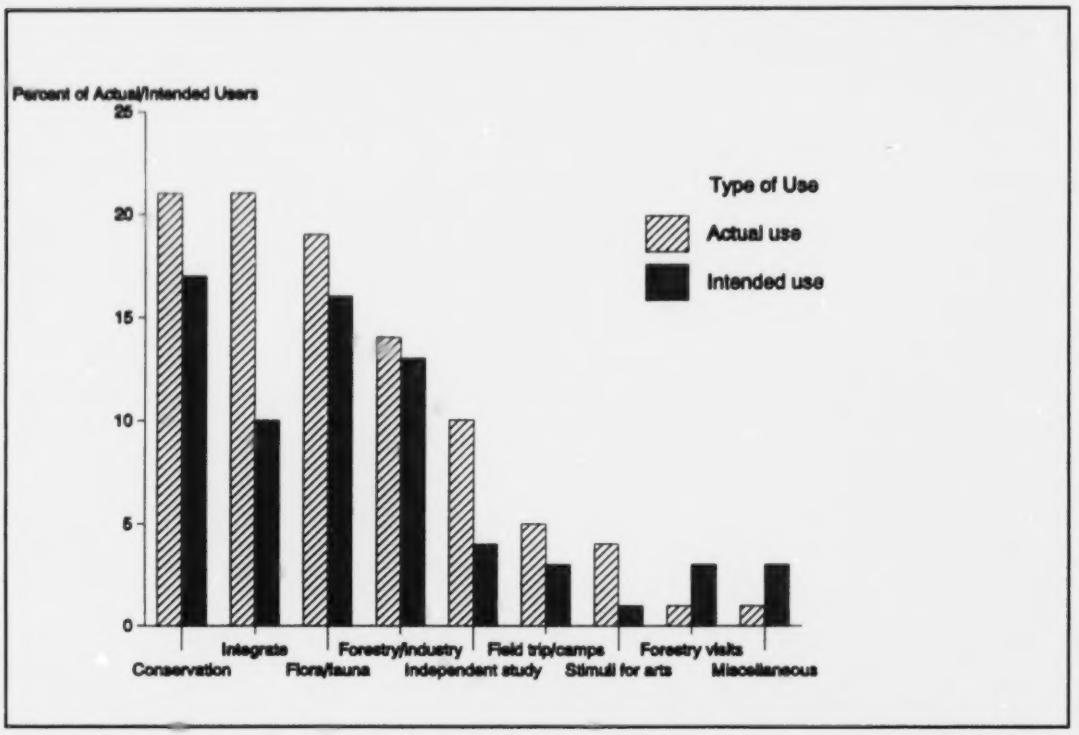
*Actual and Intended Use of **Te Ngahere***

Teachers who had used the kit in 1992, or who were planning to use it in 1993, were asked for what purpose they had used, or intended to use, the kit. Teachers appeared more likely to want to integrate the kit's components into their own lesson plans rather than use lesson plans outlined in the kit; 70% of those who had used the kit had integrated parts of the kit into their own lesson plans, and a similar percentage of those who intended to use the kit in 1993 indicated that they would use the kit for personal lesson plans rather than follow lesson plans as outlined in the kit.

Those who had used, or intended to use, their own lesson/unit plans, incorporating parts of the kit, were asked to what use they intended to put the kit. The most commonly reported use was

that of using components for conservation or environmental topics, followed by flora and fauna studies. There was also some use of the kit within an integrated curriculum framework, and some to study forestry and bush workers. Other areas in which components of the kit were used included use as part of a learning centre or individual study, outdoor education and forestry visits, and as stimuli for language, art, and drama work. Figure 2 shows the actual and intended use of the kit by teachers who had integrated, or intended to integrate components of the kit into their own lesson plans.

Figure 2
Comparison of Actual and Intended Use

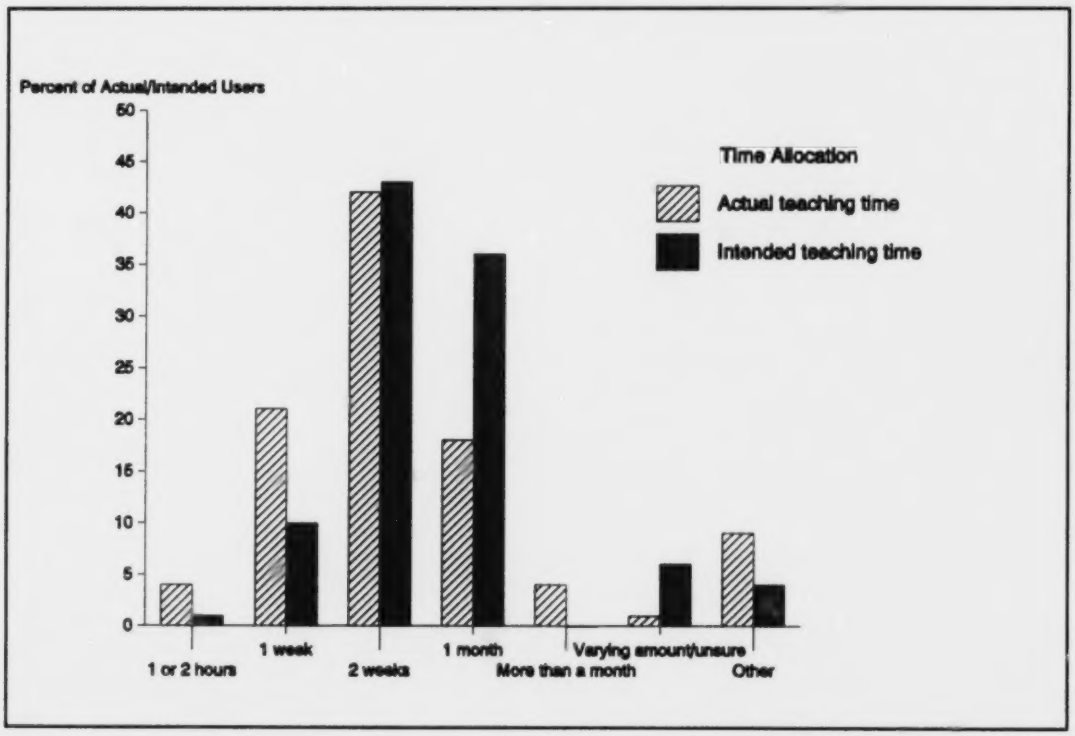


Additionally, a full list of the responses teachers gave to the question regarding how they had integrated, or intended to integrate the kit into their own lessons is given in Appendix F.

In response to the question regarding how much time teachers had devoted, or expected to devote, to the kit in their classroom, teachers indicated that the most common pattern of use was a series of lessons over 2 weeks; 42% of those who had used the kit did so within this time frame, 43% of those indicating future use also indicated this time frame. Some teachers opted for a longer time frame: 36% of those who intended to use the kit in 1993

indicated that it would be used in a series of lessons over a month, and 18% of those who had already used the kit used it over this 1-month period. Four percent of those who had already used the kit had done so in a series of lessons covering more than 1 month, although no teachers intending to use it in 1993 mentioned plans to use this extended time frame. Some teachers opted for a shorter time frame; 21% of those who had used the kit in 1992 did so in a series of lessons over a week, and 10% of those who intended to use the kit indicated that the 1-week time frame was their preferred option. Very few chose time frames shorter than 1 week. Figure 3 indicates the time spent using the kit by teachers who had used, or were intending to use, it.

Figure 3
Comparison of Actual and Intended Teaching Time Allocations



Teachers who had used the kit indicated that the most common area of the curriculum in which it was used was Science; 86% of teachers who responded to this question indicated that they had used the kit in Science, the next most common area of use was Language, followed by Social Studies and Art. Some use was also reported in Taha Maori, and Outdoor Education. Table 4 gives a complete breakdown of subject-area use.

Table 4

Curriculum Areas in Which Te Ngahere was Used in 1992

Curriculum area	no. responding (N = 73)	% of those using kit *
Science	63	86
Language	48	66
Social Studies	33	45
Art	30	41
Taha Maori	21	29
Outdoor Education	17	23
Maths	9	12
Music/Drama	4	5
Integrated through all areas	1	1
Other	4	5

(* These percentages reflect the fact that the majority of teachers used the kit in more than 1 curriculum area.)

*Teacher Response to **Te Ngahere***

The 73 (48%) teachers who had used the kit were asked a variety of questions about which parts of the kit they had used, their personal opinion of the kit, how they perceived their students' reaction to the kit, and whether they would use the kit again.

The most commonly used components were the Teachers' Guide and activity cards, followed by picture packs and posters. Resource books and Helping Hands were used by a number also.

Teachers were also asked if they found any of these components particularly useful. Activity cards were the most highly rated in this respect, followed by the Teachers' Guide, then picture packs and posters. Table 5 gives a breakdown of responses on the usefulness of the kit components.

Table 5
Opinions of the Usefulness of the Various Components of the Kit

Useful component	no. responding (N = 72)	% of those using kit *
Activity cards	55	75
Teachers' Guide	48	66
Picture packs	36	49
Posters	32	44
Resource books	21	29
Helping Hands	11	15
Other	4	5

(* These percentages reflect the fact that the majority of teachers who had used the kit rated more than 1 component particularly useful.)

When asked if they wanted to make any general comments on the components they found useful, 10 teachers made general positive comments about the whole kit, 3 comments were made about the activity cards, the posters, and the Teachers' Guide, and 1 comment was made about the Fact Finder. Examples of the type of comment made are as follows:

> *Most impressed with the quality of material provided.*
>
> *It was all fantastic and children really enjoyed activity cards. Posters evoked quite a lot of discussion. Teachers' guide great.*
>
> *Activity cards were particularly suited to project and independent learning activities - they were very relevant and many were highly interesting.*

Teachers who had used the kit were asked how easy it was to use:

- 44 (60%) said they found the kit very easy to use;
- 24 (33%) found the kit easy to use;
- 4 (5%) found the kit a little difficult to use; and
- 3 (4%) found the kit very difficult to use.

Teachers who had used the kit were asked if they would like to make any general comments about how easy or difficult they found the kit:

- 10 teachers made general positive comments about the kit;
- 6 teachers stated that the kit was well set out and easy to use;

- 3 teachers mentioned that it was easy to select material from the kit for their own purposes;
- 2 people thought that the kit contained too much information and it was difficult to select what they needed;
- 1 teacher made a negative comment about the kit;
- 6 people made miscellaneous comments.

The following are examples of the comments made:

Very user friendly.

It was difficult to narrow the range of activities down, but very easy to use them in the class programme.

I think this is an excellent resource - practical and attractive to use.

Teachers' Perception of Student Reaction to ***Te Ngahere***

When teachers who had used the kit in 1992 were asked how well their students had reacted to the kit the response was very positive: 60% stated that their students had reacted very well to the kit, 33% quite well, and only 1 (1%) not very well.

The teachers were asked if they had any general comments to make about how their students had reacted to the kit: 7 made positive comments to the effect that the students had enjoyed using the kit, 2 thought that through the kit their students had developed their knowledge base, 2 teachers commented that they thought some activities were too difficult for a particular level, and 3 teachers made miscellaneous comments. Following is a selection of these general comments:

Couldn't wait to begin activities once they were outlined.

The initial question "what is a forest?" was a great one. It was good to see how the children's perceptions grew from a "place with trees" to "mother nature's zoo".

Some found the activities harder than others/but that always happens.

Suggestions for Improving ***Te Ngahere***

Teachers were asked if they had any ideas for improving the kits. Only a minority of teachers responded to this question, implying a general acceptance of the kit as it stood. The most common comment was a request for more copies of particular components of the kit. Responses have been divided into 8 categories as shown by Table 6.

Table 6
Teachers' Suggestions for Improvements to Te Ngahere

Suggested improvements	number responding (N = 30)	% of those using kit
No suggestions/positive comment	9	12
More copies of picture packs/posters	7	10
More short-term ideas/activities	4	5
More research ideas	3	4
Expand to cover fossils/native trees	3	4
Include videos and slides	2	3
Grade activities cards/less information	1	1
Miscellaneous	5	7

The improvements mentioned by teachers are listed in Appendix F.

Use in the Future

When asked if they would use the kit again in future years, all those who answered the question replied they would; 58 (79%) said they definitely would, and 11 (15%) said they probably would. Six percent of those who had used the kit did not respond to this question.

In summary, teachers appear to be incorporating all parts of the kit into their lesson plans, though the Teachers' Guide, activity cards, and picture packs are being used most frequently, and are noted as being the most useful components of the kit. When given the opportunity to make general statements about how easy the kit was to use, students' reaction to the kit, and what improvements they would like to make to the kit, the largest response group always gave a general positive statement about the kit as a whole and what a useful resource it was. Teachers appear to be finding the kit a worthwhile and valuable resource.

Source of First Information on Te Ngahere

Teachers were asked how they first found out about the kit; by far the most common method was by seeing it in the school's resource room. The next most common methods were by going to a launch of the kit or by hearing about it from a staff member who had gone to the launch. Responses to this question are summarised in Table 7.

Table 7
Source of First Information about Te Ngahere

Source of information	no. responding (N = 119)	%
By seeing it in the resource room	48	31
By going to a launch	21	14
From a staff member who attended a launch	14	9
By receiving it/opening mail	14	9
From the principal	7	5
From the resource teacher	7	5
From a colleague	6	4
Displayed in the staffroom	6	4
By seeing it in use in a classroom	5	3
Invited to, but did not attend, launch	4	3
Advisory services/MoE	3	2
Involved in the kit development	2	1
Miscellaneous	2	1

Regional Launches

When asked if they had attended a regional launch, 112 (73%) teachers replied "no" and 23 (15%) replied "yes".

Those who did attend the launch were asked whether they thought it was worth attending, what they enjoyed about the launch, and what aspects of the launch they thought could be improved on. Fifteen (65%) of teachers thought the launch was definitely worth attending, 7 (31%) moderately worth attending and 1, (4%) definitely not worth attending.

Teachers who attended the launch appeared to appreciate the explanations presented of the kit, and seeing all the levels of the kit. Also popular was the opportunity for discussion of the kit and its contents. Meeting other teachers, socialising, and enjoying the wine and food were also mentioned by a number of attendees.

Comments teachers made on the aspects of the launch they enjoyed were divided into 6 categories and are presented in Table 8.

Table 8
Aspects of Launch Enjoyed by Teachers who Attended

Aspect of launch enjoyed	number responding (N = 21)	% of those attending
Explanation of kit/seeing all levels	10	43
Discussing the kit/the kit contents	9	39
Meeting other teachers/socialising	7	30
The food, wine, and cheese	7	30
Meeting the developers	6	26
Miscellaneous	2	9

The following are examples of comments by teachers on aspects of the launch they enjoyed:

> *The mingling of business people and education people - there is a difference! We need more of this exchange of ideas. The Food! Much more exotic than teachers normally have. I thought it was done very well.*
>
> *The explanation about how and by whom the kit was designed. The discussion about the contents. The meeting and discussing the kit with colleagues.*
>
> *Chance to become familiar with full scheme for forestry insight over all levels.*

Comments teachers made on the aspects of the launch that could have been improved on were divided into 5 categories: of the 23 teachers who attended the launch, 8 (35%) said that there were no aspects that needed to be improved on, 3 (13%) teachers thought breaking into smaller discussion groups would have been useful, 1 person thought that more visual aids were needed, 1 person would have preferred a smaller scale launch, and 1 person stated that the timing of the launch was unsuitable. Examples of these comments are as follows:

> *It may have been good to break into the sections of the school i.e., junior, middle, intermediate etc. to go through the kit rather than listen to outlines of all the levels.*
>
> *It was a bit of overkill PR wise. It would only have taken a couple of people really familiar with the resource to tell me what I wanted to know.*
>
> *I thought it was all very well done. It's always good to see examples of what teachers have done in their own classes.*

Teachers were asked how they reported back about the launch: the majority of those who attended the launch reported back in some way to their school colleagues; the most common method was within the context of a staff or syndicate meeting, although some teachers only reported back informally. Table 9 presents a breakdown of the type of report back given by teachers in the sample who had attended the launch.

Table 9
Type of Report Back Given by Teachers in the Sample Who had been to a Regional Launch of Te Ngahere

Method of report back	number responding (N = 23)	% of those attending
Staff meeting	16	70
Informal discussion	8	35
Syndicate meeting	5	22
No report back	2	9
Miscellaneous	4	4

Teachers in the sample who indicated that they had not attended the launch themselves were asked if anyone at their school had attended: 85 replied no, 20 replied yes, and 14 were not sure.

Of the 20 teachers whose colleagues attended a launch, 15 noted that there was a report-back session, 4 said there was no report back, and 1 was not sure. Fourteen stated that the report back was in the form of a staff meeting, 4 an informal discussion, and 2 noted that there was no need for a feedback as they taught in a sole charge school.

In summary, 24% of the sample of schools responding to the questionnaire sent a representative to a launch, and the majority of these representatives reported back to the other teachers in the school. Most of those who attended the launch found it an informative and enjoyable experience.

Teachers Who Did, and who Did Not go to the Launch - a Comparison

Thirty-seven or 24% of schools had sent a representative to a launch; 103, or 67%, had no representative at a launch. These 2 groups were compared on questions regarding level of kit awareness and actual and intended use of the kit to ascertain if there were any statistically significant differences in their response to the questionnaire.

Slightly more (58%) launch-attending schools had used the kit compared to non-attending schools (48%).

On most questions attenders and non-attenders responded in similar fashions. The only exception was for the question on purposes for which the kit was actually used, with 8% of attendees stating that they followed the lessons outlined in the kit compared to 20% of non-attendees, and 56% of attendees stating they integrated the kit into their personal lesson plans compared with 29% of non-attenders (Chi sq = 4.51, df = 1, $p < 0.05$). It seems that teachers in launch-attending schools are more likely to use the kit for their own purposes.

Secondary School Survey

Characteristics of Respondents

In total, 4 secondary school questionnaires were sent to each secondary school, 1 each to the Heads of Department of Geography, Science, Economics, and Design and Technology. However, not all Heads returned questionnaires, leading to a variable response rate both across schools and departments. Fifty-four schools (68%) returned at least 1 questionnaire. The department that returned the questionnaire most often was Geography (59%), followed by Science (51%). Less frequently returned were questionnaires from Economics (37%), and Design and Technology (42%) departments. A small part of these lowered response rates may be due to the fact that not all schools in the sample had Economics or Design and Technology departments. Overall percentages of schools that returned none, 1, 2, 3, or 4, questionnaires are shown in Figure 4.

Figure 4
Number of Questionnaires Returned by Schools

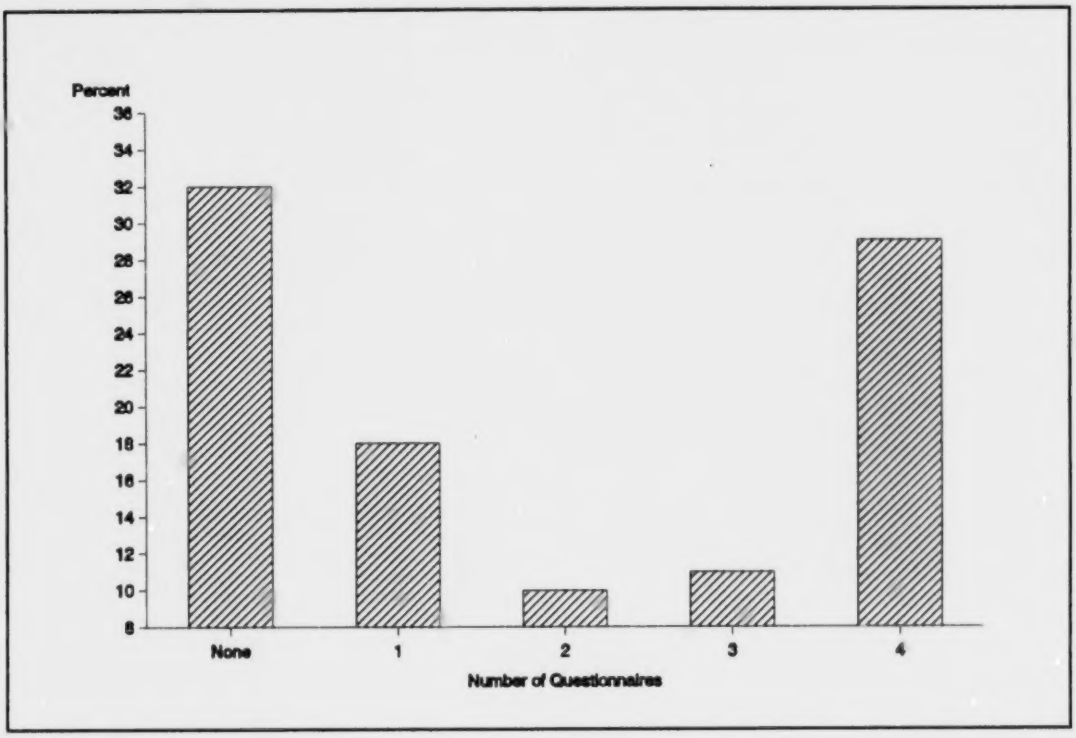


Table 10 shows the response rates of schools across districts in comparison to the original sample distribution of schools.

Table 10
Number of Secondary Schools Responding by District

District	sample %	% of schools responding	no. of schools responding (N = 54)
Northland	3.0	-	-
Auckland	27.5	35.0	19
Waikato	8.0	5.5	3
Bay of Plenty	6.0	7.5	4
Central West	12.5	11.0	6
Central East	4.5	5.5	3
Central South	11.0	7.5	4
Malb/Nelson/Westland	6.0	11.0	6
Canterbury	15.5	11.0	6
Otago	4.5	4.0	2
Southland	1.5	2.0	1

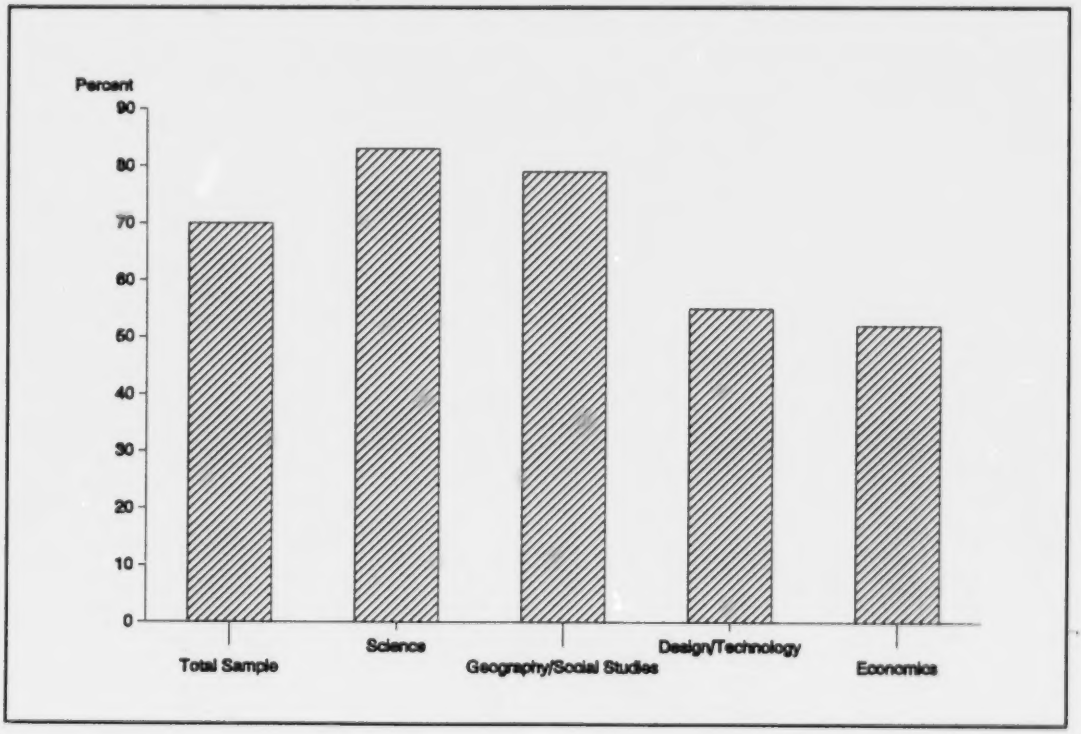
Differences between our original sample and the response sample were not significant in the secondary survey; a full breakdown of the type and size of respondents' schools can be found in Appendix E.

Ninety-nine percent of the respondents taught forms 5 to 7, 89% taught forms 3 to 4, 5% taught forms 1 to 2, and 3% taught groups such as adult education classes that did not easily fit into the above classifications.

*Knowledge of **Te Ngahere***

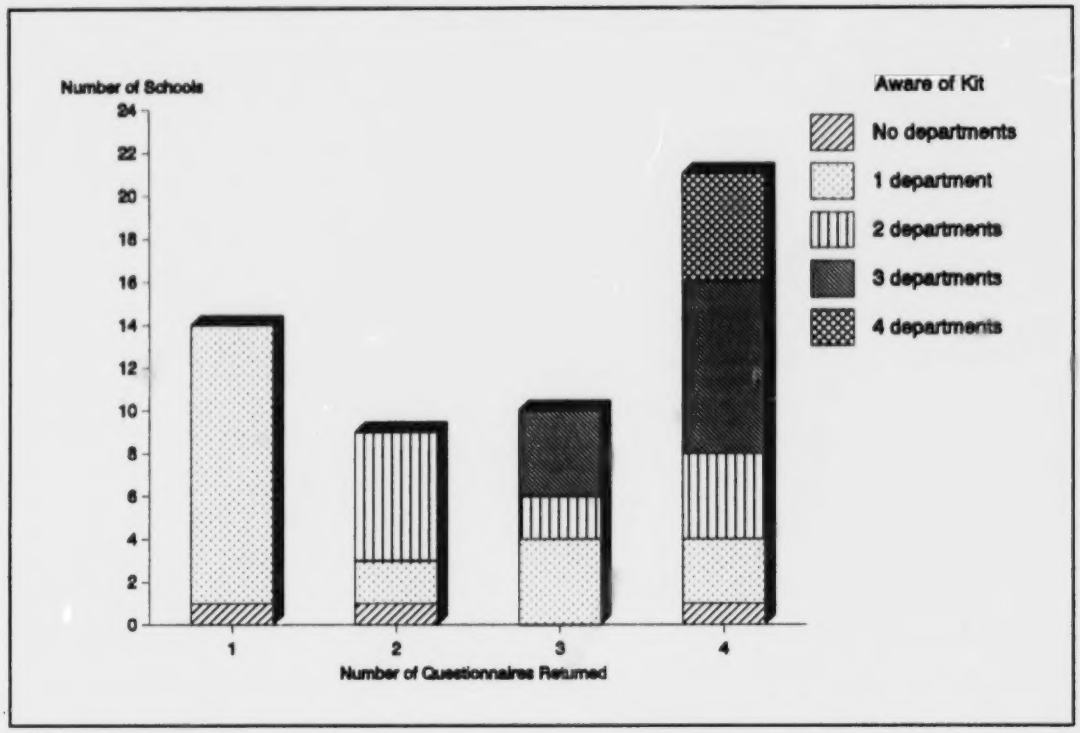
Of the total number of teachers who responded to the questionnaire, 104 (70%) were aware of **Te Ngahere,** and 45 (30%) were not. Respondents from Science departments had the highest level of awareness (82%), followed by Geography (79%). Respondents from Design and Technology and Economics departments tended to be less aware (55% Design, 52% Economics). These differences approached but did not reach statistical significance (Chi sq = 12.43, df = 3, $p < 0.06$). Figure 5 shows awareness of the kit across departments.

Figure 5
Awareness of Kit Between Departments



Within schools, teachers' awareness of the kit varied across departments; in only 5 out of the 23 schools that returned all 4 questionnaires were teachers in all 4 departments aware of the kit. In fewer than half of the schools, all those teachers who filled out a questionnaire were aware of the kit's existence. In 24 of the 31 schools that returned fewer than 4 questionnaires some teachers were aware of the kit while others were not. Figure 6 shows the variability of awareness within schools.

Figure 6
Variability of Awareness Within Schools



Of those 104 respondents who knew of the kit, 72 were familiar with the kit's contents (2 of those 72 had participated in the development of the kit). Table 11 gives a breakdown of teachers responses as to their level of familiarity with the kit.

Table 11
Level of Familiarity with the Contents of the Kit

Level of familiarity	no. responding (N = 104)	%
Familiar with contents	70	67
Have only seen box exterior	22	21
Superficially scanned box	11	11
Participated in development of kit	2	2
Know of but have not received	2	2
Know of but have not seen	2	2
Miscellaneous	2	2

A departmental analysis of those who were aware of the kit showed 72% of the Science departments to be familiar with the kit's contents, 65% of Geography, 72% of Design and Technology, and 53% of Economics.

*Location of **Te Ngahere***

Of the teachers who were aware of the kit;

- 41% of the teachers noted that their school kept the resource in the Science department;
- 36% in the Geography department;
- 22% in the Social Studies department;
- 18% in the Design and Technology department;
- 16% in the Economics department;
- 10% in the library;
- 6% in the staffroom;
- 4% in the resource room;
- 4% were unsure where the resource was kept;
- 7% gave miscellaneous answers.

In summary, knowledge of the kit is not evenly distributed across the school, as shown by only a small proportion of the sample having teachers in all 4 departments aware of the resource. Knowledge of the resource also appears to be concentrated in Science and Geography/Social Studies departments where the resource is also more likely to be kept.

Prevalence of Use in Teaching Programme

Forty-one (39%) of the total response sample of teachers had used the kit in their teaching programme in 1992. When this figure is divided into departments, the results are as follows: 50% of teachers in Science departments had used the resource, 46% in Geography, 28% in Design, and 20% in Economics.

When teachers who had heard of the resource, but had not used it, were asked their reasons for not using the resource, the most common response was that they planned to use it next year. Another reasonably common response was that they had already completed the relevant topics or that they did not have time in 1992. Table 12 gives a breakdown of the reasons teachers gave for not using the kit in 1992.

Table 12
Reasons Given by Teachers Aware of the Kit for Not Using it in 1992

Reason	number responding (N = 58)	% of those aware of, but not using, the kit
Plan to use it next year	34	54
Completed suitable topics	25	40
No time this year	18	29
Not relevant to programme	10	16
Not an appealing resource	2	3
No particular reason	2	3
Miscellaneous	10	16

Each department followed a similar pattern to the above results. Of those who had used the kit, half had used the lower secondary kit and half had used the upper secondary kit.

Actual and Intended Kit Use

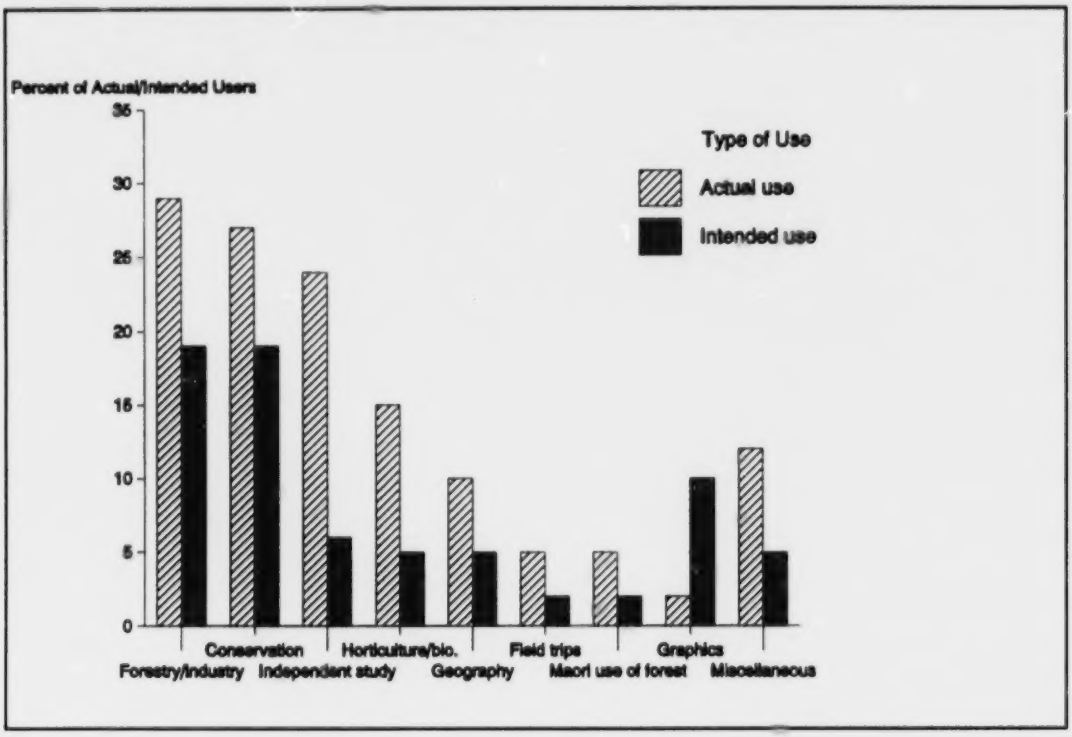
Teachers who had used the kit in 1992, and those who were planning to use it in 1993, were asked a similar series of questions about their actual or planned use of the kit, and actual or planned teaching time allocations for it.

Almost all teachers who had used the kit integrated components of it into their own lesson plans, rather than using the plans as outlined in the kit, and almost all teachers who intended to use the kit in the following year also intended to integrate parts of it in personal lesson plans.

For both teachers who had used, and teachers who intended to use the kit, the most predominant uses of it were for economics/ industry/forestry topics, and conservation/resource management. Some use was also reported of the kit as an independent learning resource amongst teachers who had used it, although this was less commonly reported by those intending to use the kit in 1993. Figure 7 gives a breakdown of actual and intended use across a number of categories. These categories were determined after

examining the type of response to the question in the survey asking for a description of the sort of use made of the kit.

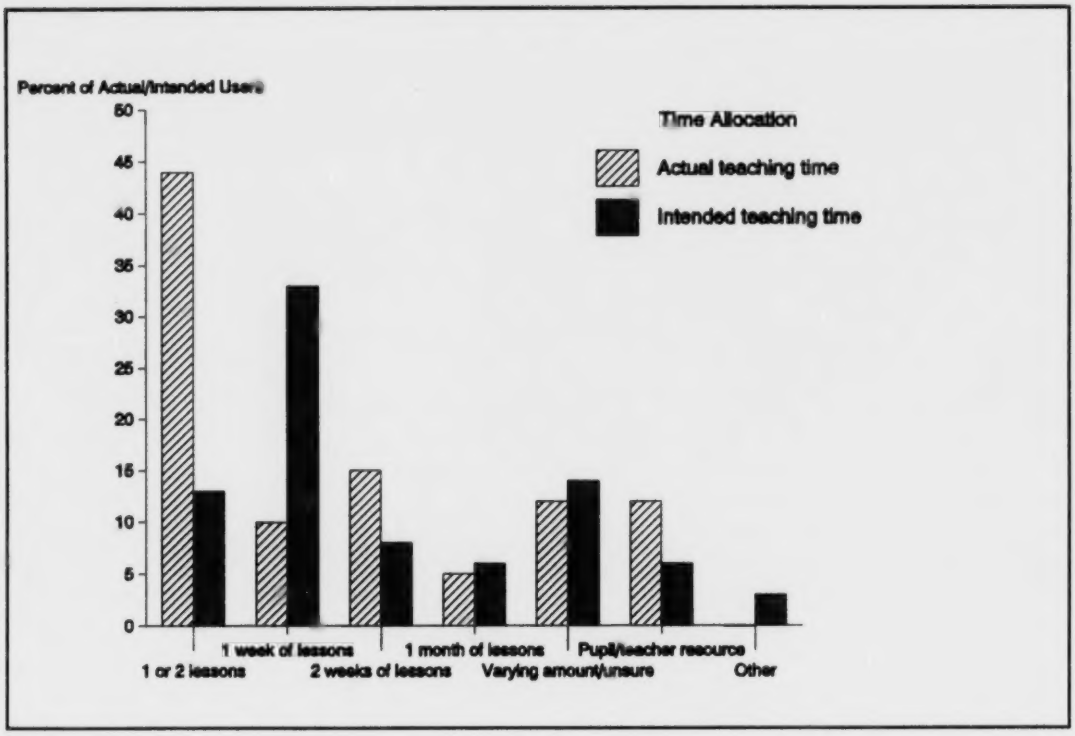
Figure 7
Comparison of Actual and Intended Use



The amount of time devoted to use of the kit in the secondary survey was shorter than the amount of time reported in the primary survey; of the respondents who had used the kit, 44% spent only 1 or 2 lessons on the kit, 10% spent 1 week, and 15% spent 2 weeks of lessons. Intended use was a little more, although the differences were not significant; 13% of those intending to use the kit in 1993 planned to use it for 1 or 2 lessons, and 33% intended to utilise it for a week of lessons. Figure 8 gives a complete breakdown of the amount of time teachers have given, or intend to give, to the kit.

Figure 8

Comparison of Actual and Intended Teaching Time Allocations



*Teacher Response to **Te Ngahere***

The 41 teachers who had used the kit in 1992 were asked a series of questions on the subject areas they had used the kit in, the parts of the kit they had used, whether they found any parts of the kit particularly useful, what they thought of the kit, how their students had reacted to the kit, whether they would use the kit again, and whether they had any suggestions for improvements.

Of the users of the kit:

- 13 (32%) had used the kit in Science lessons;
- 12 (29%) in Geography;
- 7 (17%) in Social Studies;
- 5 (12%) in Design and Technology;
- 3 (7%) in Economics.

Teachers also listed subject areas that were not surveyed by this questionnaire with 4 (8%) teachers mentioning using the kit in Horticulture and Agriculture and 3 (7%) in Fishing and Forestry.

Teachers were asked which parts of the kit they had used. By far the most commonly used component was the resource book (80%), although nearly half of the respondents indicated they had used the activity sets. Table 13 shows use of components of the kit.

Table 13
Use of Components of Te Ngahere

Component used	no. responding (N = 39)	% of those using the kit
Resource books	33	80
Activity sets	20	49
Posters	15	37
Video	11	27
Helping Hands	4	10

When asked if there were any parts of the kit that were particularly useful, most teachers who used a component also stated that they found that component useful. Table 14 shows the frequency with which teachers found components useful.

Table 14
Usefulness of Components of Te Ngahere

Useful component	no. responding (N = 39)	% of those using the kit
Resource books	31	76
Activity sets	15	37
Posters	12	29
Video	9	22
Helping Hands	4	10

In this section 5, (12%) people made extra positive comments about the kit as a whole, 3 (7%) made extra comments on the resource books, and 3 (7%) on the video. For example:

> *Top quality! Now we are more familiar with the kit we will use it more extensively - video has impact.*
>
> *The ideas are really good but I would like to see an agricultural booklet and associated materials prepared to add to the kits.*
>
> *Thank you for making an effort to produce these resources. The sentiments are commendable and the information conveyed*

valuable. We have yet to view the video but will do so before teaching the relevant topics next year. Thank you, I hope our comments are useful. The posters brighten up many spots in the school and are very well done.

When asked how easy they found the kit to use 22, (54%) teachers said they found the kit quite easy to use, 15 (37%) found the kit very easy, and 2 (2%) found the kit a little difficult. Three (7%) teachers made general positive comments about the kit and 3 (7%) made miscellaneous comments.

Teachers' Perception of Student Reaction to ***Te Ngahere***

Of the teachers who had used the kit, 24 (59%) thought that their students had reacted quite well to the kit, 14 (34%) thought their students had reacted well, and only 1 (2%) thought the students had reacted poorly. Two teachers made general positive comments, 1 teacher commented that the video had been well received, and 4 teachers made miscellaneous comments. Following are examples of the comments made:

I asked for student feedback at the end of each exercise: Hunter's Forest; Planning Harvest Operations; Greenhouse Effect. They reported that they enjoyed the activities.

Modified for use with students.

Suggestions for Improving the Kit

Few teachers commented when asked for suggestions for improving the kit; of those who did the most common response was to make a positive comment or say that no improvement was needed. Table 15 gives a breakdown of the few comments that were made.

Table 15
Suggested Improvements to Te Ngahere

Improvement	no. responding (N = 12)	% of those using the kit
No improvement/positive comment	4	10
More specific information	3	7
More activities	2	5
Additional sections	2	5
More visuals	2	5
Miscellaneous	3	7

Use in the Future

The vast majority of teachers who had used the kit - 33 (80%) - stated that they would definitely use the kit again, and 8 (20%)

stated they would probably use the kit again. No teacher indicated that s/he did not intend to use the kit again.

In summary, of the teachers who had used the kit, the majority found the resource easy to use, well set out, and well received by their students. Most teachers thought the kit needed little improvement, and that they were likely to use it again. The kit is being used within a wide range of subject areas - perhaps wider than the writers had at first envisaged as new areas such as Horticulture and Forestry become specific areas of the curriculum.

*Source of First Information on **Te Ngahere***

Respondents were asked what their first source of information about the kit was; their responses were divided into 8 different categories. The most common source of information was other teachers or departments and the second most common was simply by receiving the kit in the mail. Table 16 displays the responses of teachers when asked where they first learnt about the kit.

Table 16
Teachers' Source of First Information About the Kit

Source of information	no. responding (N = 71)	% of those aware of kit
From colleague/other department	19	18
Receiving kit/opening mail	13	13
Newsletter/this questionnaire	13	13
From principal/head of department	10	10
Went to launch	9	9
Display in staffroom/staff meeting	5	5
Involved in planning/trialling resource	2	2
Invited to launch but did not attend	2	2

Regional Launches

Twenty-three of the respondents to our survey had been to a regional launch.

Launch attendees were asked what aspects they found worthwhile;

- 14 (61%) found the explanation of the kit, and seeing all the different levels useful;
- 9 (39%) found meeting the developers of the kit a worthwhile experience;
- 4 (17%) enjoyed the social aspect of meeting other teachers;
- 3 (13%) enjoyed the food, wine, and cheese;

- 2 (9%) found discussing the kit worthwhile.

The following are a few examples of these comments:

Explanation by teachers and personal meeting other teachers interested in this area.

Booze and tea and chat.

Food! Pleasant atmosphere - it was wonderful and very successful.

Those attending were asked if they thought any aspects of the launch could have been improved on; the majority of those who answered this question (7, or 30%) made a positive comment about the launch or noted that there was no need for improvements, 2 people made comments on presenter style, and 1 comment was made on each of the following - the travelling distance to the launch, needing more time to talk to the kit writers, needing more training in using the kit, and launch overkill. Examples of comments are as follows;

It was okay.

Nothing, it was good. Little too long on speeches! But acceptable.

Actual training/in-service in the use of the kits.

When asked if they had reported back to other staff members, the majority replied that they had, their feedback often taking more than one form. The variety of ways in which teachers undertook to report back to their colleagues are shown in Table 17.

Table 17
Teachers Report-back Methods

Method of report back	no. responding (N = 23)	% of those attending
Informal discussion	14	61
Departmental staff meeting	9	39
Full staff meeting	7	30
Staffroom display	2	9
Did not report back	1	4
Miscellaneous	1	4

Of the teachers who had not attended a launch, 31 (39%) noted that another staff member had attended, 14 (18%) noted that other staff members had not attended, and 34 (43%) were unsure.

Of these other teachers who attended a launch, 24 (77%) reported back to their colleagues.

In summary, 26 (33%) of the schools sampled attended or had a representative attending a launch. Most of these representatives reported back to other staff members by a variety of means. The majority appeared to find the launch a valuable experience.

Teachers who did, and who did not go to the Launch - a Comparison

The responses of teachers who had attended a launch or had a representative from their school at a launch were compared to the responses of teachers whose school had no representative attending a launch. These 2 groups were checked for statistically significant differences on questions concerning awareness of the kit, curriculum area use and storage, and actual and intended use.

Of those teachers whose school had a representative attending a launch, 76% stated that they were aware of the kit compared to 64% of non-attending teachers. This difference is not significant. On nearly all questions the 2 groups were similar except for the question concerning where the resource was kept; schools where teachers had attended a launch were more likely to spread the resource around the school, although there was a tendency for the Science department to house the kit more often - 50% of respondents reported 1 of the kit's locations to be the Science department. In contrast, those that had no representative at a launch tended to keep the resource in the Geography (45%), Science (31%), and Social Studies (31%) departments, with few reports of other locations being used for kit storage (Chi sq = 14.34, df = 6, $p < 0.05$). A possible explanation for this difference could be that the schools with representation at the launches had feedback sessions thereby alerting staff from other departments to the kit, though the attending and non-attending groups were very similar in regards to the subject areas that the kit was used in even given the differences in kit location.

SUMMARY AND CONCLUSIONS

Primary Survey

* In the primary sector the response rate was acceptable, and an analysis of the distribution of responses indicates that the response sample can be considered reasonably representative of New Zealand's primary and intermediate schools. Almost all of the schools in the response sample had at least 1 teacher who was aware of the kit's existence. However, in this respect the sample *may* be a little biased, since people may have a tendency to reply to a survey more often when they know about the subject of the survey.

* Despite this reservation, the picture of knowledge and use in the primary school is quite promising; **Te Ngahere** had been in school for only 2 terms at the time of the survey, ***yet almost three-quarters of the respondents had already used it, or intended to use it in 1993.***

* Those who had used it were overwhelmingly positive about kit content and format. Teachers appeared to be devoting a reasonable amount of time to their use of the kit; the most common time frame was a series of lessons over 2 weeks, followed by a series of lessons over 1 month. Developers of the kit can be well pleased with these sorts of time slots, since there are many competing demands on the primary school curriculum and **Te Ngahere** has had relatively little time to make an impact.

* The manner in which the kit is used by primary and intermediate schools may have a slightly different emphasis than that planned by the developers; the kit was often used to enhance conservation studies, although some use was made of the kit to study forestry as an industry.

* The real impact on pupils' perceptions of forestry as an industry cannot, however, be gained by a postal survey of teachers. An assessment of attitudinal change of students after completing work with the **Forestry Insights** material can only be gained by direct assessment of pupils, before and after exposure to the kit. The parameters of such an exercise were discussed briefly in the introduction to this report.

Secondary Survey

* The secondary sample does not present as clear a picture as the primary sample for a number of reasons. Firstly, while a good number of schools returned at least 1 questionnaire, a much smaller number returned all 4 questionnaires as requested. The nature of this response rate can be partially attributed to concerns expressed at the outset of the project; November is a particularly busy time for secondary school teachers as they prepare students for external exams and end-of-year activities. However, additionally 2 departments were particularly poor in responding - Design and Technology and Economics. With this lowered response rate, we can be less certain that the secondary response sample is representative of the national picture than we are with the primary sample, particularly in relation to Design and Technology and Economics departments. More confidence can be placed in general secondary level findings than trends within departments.

* What tentative conclusions can be suggested then from the secondary survey? Firstly, knowledge of the kit is less widespread than in the primary sector; at least 1 teacher in almost all primary schools had heard of the kit, whereas 70% of respondents had heard of the kit at the secondary level. Given the lower response rate, and the tendency of those surveyed to be less likely to respond if they have not heard of **Te Ngahere**, one could surmise a far less pervasive knowledge of the kit especially in Design and Technology, and Economics departments.

* Some comments in a number of questionnaires from the secondary sector indicated that teachers only became aware of the kit quite late in 1992 - indeed, sometimes at the same time as this survey arrived. Accordingly the secondary sector perhaps takes longer to "infiltrate". More attention perhaps needs to be directed towards reaching departmental heads of Design and Technology and Economics directly, rather than through other departments. For example, Science and Geography teachers were more likely to attend launches than representatives of the other 2 departments. Then, they reported back to their own departments only, rather than to interdepartmental briefings.

* Although the numbers using the kit were lower at secondary level, this appeared to be due to a time factor for 1992 - the kit became available after they had completed the relevant topic/s. Planning is often less easily altered at secondary level, and tends to be longer term. ***Those that had used the resource were positive about it and all intended to reuse it.*** This is encouraging and indicates

that the quality and relevance of the kit is not in question and that the current lower level of use in secondary schools may not be predictive of the level of future use.

* Secondary teachers appear to use the kit, or components of it, for smaller blocks of time than was indicated in the primary survey. ***However, teachers often indicated their intention to use it for longer time periods in 1993. Accordingly these small time blocks for kit use should not be seen as an indication of future use.***

* As in the primary sector the kit was most often used in Science. From our responses it appears that the kit was used a little more often in an industry/forestry framework than it was at primary level; actual use in this framework was slightly more than use of the kit in conservation studies. Use of the kit as an independent learning resource and as a teacher resource was also a notable feature at secondary level.

* It appears that components of the kit were *not* distributed across departments as planned, tending to reside more often in Geography and Science departments.

Regional Launches

* In the response sample about 25% of primary schools had attended the launch and about 33% of secondary schools had sent a representative to the launch. At neither school level was attending the launch the most frequent method by which teachers heard of the resource.

* Generally those who attended the launch were positive about the format and the opportunity to socialise! Reporting back to other school colleagues happened often, but not always. Additionally, report-back sessions were not always in the form of a full staff meeting. Clearly, launches assisted the promulgation of the resource, but were not by any means the major source of first information for teachers. Accordingly, the developers may like to consider additional means of advertising the next phase of the kit, particularly in secondary schools.

APPENDIX A

Primary and Intermediate Level Questionnaire

Forestry Insights Questionnaire

Please answer by ticking the most appropriate box (or boxes), and/or writing in the space provided.

1) What type of school do you teach in?

a) ☐ Contributing primary
b) ☐ Full primary
c) ☐ Intermediate
d) ☐ Area school
e) ☐ Form 1-7 school
f) ☐ Other (Please describe)

_____ x 1 2 3
4 5 6
_____ 7 8 9
_____

2) The school is

a) ☐ State
b) ☐ Integrated
c) ☐ Private

3) The school roll is

a) ☐ Under 80
b) ☐ Between 81-120
c) ☐ Between 121-300
d) ☐ Between 301-450
e) ☐ Over 450

4) What class level/s do you teach?

a) ☐ Junior classes
(New Entrant to J3/Std 1)
b) ☐ Standards 2-4
c) ☐ Forms 1-2
d) ☐ Other (Please describe)

_____ x 1 2 3
4 5 6
_____
7 8 9
_____

5) Are you aware of the **Forestry Insights** new kit, **The Forest**, which was sent to your school earlier this year?

a) ☐ Yes b) ☐ No

If you answer "no" to this question, please do not complete the questionnaire further, but return it to NZCER in the addressed and stamped envelope provided. Your responses to the first 5 questions are important to the survey. Thank you for participating. Don't forget that schools returning their questionnaires by Friday 20 November will receive a complimentary gift; see the covering letter to the Principal of your school for details of this gift.

6) How familiar are you with the resource?

a) ☐ Have only seen the exterior of the box
b) ☐ Have looked at the contents
c) ☐ Am familiar with the contents
d) ☐ Other (Please describe)

_____ x 1 2 3
4 5 6
_____
7 8 9
_____

7) Have you used the kit in your teaching programme at all this year?

a) ☐ Yes b) ☐ No

If you answered "yes" to Question 7, please move to Question 11. If you answered "no" to Question 7, please answer Questions 8,9 and 10, then move to Question 20.

8) Why haven't you used the kit this year?

a) ☐ Plan to use it next year
b) ☐ Not relevant to teaching programme this year
c) ☐ Didn't have time this year
d) ☐ The resource did not appeal to me
e) ☐ No particular reason
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

9) If you plan to use the resource next year, for what purpose/s will you use it?

a) ☐ Will follow the lesson outlines in the kit

b) ☐ Will integrate the kit or parts of it into school or personal lesson plans

If you answered "yes" to b) of this question, please describe the purposes for which you will use the kit.

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

10) How much teaching time do you think you will devote to the kit?

a) ☐ 1 or 2 hours
b) ☐ Series of lessons over a week
c) ☐ Series of lessons over 2 weeks
d) ☐ Series of lessons over 1 month
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

11) If you answered "yes" to Question 7, please indicate which level/s of the kit you used.

a) ☐ Junior
b) ☐ Standards
c) ☐ Intermediate

12) In which curriculum area/s did you use the kit?

a) ☐ Science
b) ☐ Language
c) ☐ Art
d) ☐ Music/Drama
e) ☐ Taha Maori
f) ☐ Social Studies
g) ☐ Maths
h) ☐ Outdoor Education
i) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

13) Which parts of the kit did you use?

a) ☐ Teachers' Guide
b) ☐ Helping Hands (People resource information)
c) ☐ Picture packs
d) ☐ Activity cards
e) ☐ Posters
f) ☐ Resource books
g) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

14) For what purpose/s was the kit used?

a) ☐ Followed the lesson outlines in the kit.
b) ☐ Integrated the kit or parts of it into school or personal lesson plans.

If you answered "yes" to b) of this question, please describe the purposes for which you will use the kit.

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

15) How much teaching time did you devote to using the kit?

a) ☐ 1 or 2 hours
b) ☐ Series of lessons over a week
c) ☐ Series of lessons over 2 weeks
d) ☐ Series of lessons over 1 month
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

16) Were there any parts of the kit that you found particularly useful?

a) ☐ Teacher's Guide
b) ☐ Helping Hands (People Resource information)
c) ☐ Picture packs
d) ☐ Resource books
e) ☐ Activity cards
f) ☐ Posters
g) ☐ Other (Please describe)

Comment:

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

17) Over all, did you find the resource easy or difficult to use?

a) ☐ Very easy
b) ☐ Quite easy
c) ☐ A little difficult
d) ☐ Very difficult

Comment:

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

18) How did your students react to the activities/resources you used from the kit?

a) ☐ Very well
b) ☐ Quite well
c) ☐ Not very well
d) ☐ Poorly

Comment:

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

19) Do you have any suggestions for improving the contents of the kit?

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

20) Would you use the kit again in future years?

a) ☐ Definitely
b) ☐ Probably
c) ☐ Doubtful
d) ☐ Definitely not

21) How did you find out about the kit?

a) ☐ By going to a regional launch
b) ☐ From a staff member who went to a regional launch
c) ☐ By seeing it in school resource room
d) ☐ By seeing it in use in a classroom
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

22) Did you attend a regional launch for the kit?

a) ☐ Yes
b) ☐ No

If you answered "no" to Question 22, please move to Question 27.

23) If you answered "yes" to Question 22, did you feel the launch was worth attending?

a) ☐ Definitely
b) ☐ I think so
c) ☐ Not really
d) ☐ Definitely not

24) What aspects of the regional launch did you enjoy?

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

25) What aspects of the regional launch do you feel could have been improved on?

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

26) How did you report back to other staff at school about the regional launch?

a) ☐ Staff meeting
b) ☐ In-service training day
c) ☐ Syndicate meeting
d) ☐ Informal discussion
e) ☐ No report-back session
d) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

If you attended the regional launch yourself, you have now completed the Questionnaire. Thank you. Please return to NZCER via the Principal. Don't forget that schools returning their questionnaires by Friday 20 November will receive a complimentary gift; see the covering letter to the Principal of your school for details of that gift.

27) Did anyone at your school attend a regional launch of the kit?

a) ☐ Yes
b) ☐ No
c) ☐ Not sure

28) If you answered "yes" to Question 27, was there a report back by staff attending?

a) ☐ Yes
b) ☐ No
c) ☐ Not sure

29) If you answered "yes" to Question 28, what form did the report back take?

a) ☐ Staff meeting
b) ☐ In-service training day
c) ☐ Syndicate meeting
d) ☐ Informal discussions
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

Thank you for completing this questionnaire. Please return the questionnaire to NZCER via the Principal. Don't forget that schools who return their questionnaires by Friday 20 November will receive a complimentary gift; see the covering letter to your Principal for details of this gift.

APPENDIX B

Secondary Level Questionnaire

Forestry Insights Questionnaire

Please answer by ticking the most appropriate box (or boxes), and/or writing in the space provided.

1) What type of school do you teach in?

a) ☐ Form 3 to Form 7 secondary school
b) ☐ Area school
c) ☐ Form 1 to 7 school
d) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

2) The school is

a) ☐ State
b) ☐ Integrated
c) ☐ Private

3) The school roll is

a) ☐ Below 100
b) ☐ Between 101 - 300
c) ☐ Between 301 - 600
d) ☐ Between 601 - 800
e) ☐ Over 800

4) What class level/s do you teach? *(Tick more than one box if required)*

a) ☐ Forms 1 - 2
b) ☐ Forms 3 - 4
c) ☐ Forms 5 - 7
d) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

5) What subject area/s have you taught in this year? *(Tick more than one box if required)*

a) ☐ Social Studies
b) ☐ Geography
c) ☐ Science
d) ☐ Economics
e) ☐ Design & Technology
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

6) Are you aware of **Forestry Insights** new resource kit, **The Forest**, which was sent to your school earlier this year?

a) ☐ Yes b) ☐ No

If you answer "no" to this question, please do not complete the questionnaire further, but return it to NZCER in the addressed & stamped envelope provided. Your responses to the first six questions are important to the survey. Thank you for participating. Don't forget that schools who return their questionnaires by Friday 20 November will receive a complimentary gift; see the covering letter to the Principal of your school for details of this gift.

7) How familiar are you with the resource?

a) ☐ Have only seen the exterior of the box
b) ☐ Am familiar with the contents
c) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

8) Where in the school is the resource kept? *(Tick more than one box if required)*

a) ☐ Social Studies Dept
b) ☐ Geography Dept
c) ☐ Science Dept
d) ☐ Economics Dept
e) ☐ Design & Technology Dept
f) ☐ Library
g) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

9) Has the kit, or parts of it, been used in your department's teaching programme this year?

a) ☐ Yes b) ☐ No

If you answered "yes" to Question 9, please go on to question 13. If you answered "no", please answer Questions 10, 11 and 12, and then move on to Question 21.

10) Why hasn't the kit been used this year? *(Tick more than one box if required)*

a) ☐ Plan to use it next year
b) ☐ Already completed topics for which it would have been suitable
c) ☐ Not relevant to teaching programme this year
d) ☐ No time this year
e) ☐ Not an appealing resource
f) ☐ No particular reason
g) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

11) If the kit, or parts of the kit, is to be used next year, for what purpose/s will it be used?

a) ☐ Will follow the lesson outlines in the kit
b) ☐ Will integrate the kit or parts of it into school or personal lesson plans

If you answered "yes" to b) please describe the purposes for which the kit will be used.

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

12) How much teaching time do you expect to devote to the use of the resource?

a) ☐ 1 or 2 lessons
b) ☐ A week's lessons
c) ☐ 2 weeks of lessons
d) ☐ A month of lessons
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

If the kit has not been used in your department this year, please move on to Question 21.

13) If you answered "yes" to question 9, please indicate which level of the kit was used. *(Tick both boxes if necessary)*

a) ☐ Lower secondary kit b) ☐ Upper secondary kit

14) In which subject area/s was the kit used? *(Tick more than one box if required)*

a) ☐ Social Studies
b) ☐ Geography
c) ☐ Science
d) ☐ Economics
e) ☐ Design & Technology
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

15) Which parts of the kit were used? *(Tick more than one box if required)*

a) ☐ Resource Books
b) ☐ Activities
c) ☐ Posters
d) ☐ Helping Hands
e) ☐ Video
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9
_____

16) For what purpose was the kit used?

a) ☐ Followed the lesson outlines in the kit.

b) ☐ Integrated the kit, or parts of the kit, into school or personal lesson plans.

If you answered "yes" to b) please describe.

_____ x 1 2 3

_____ 4 5 6

_____ 7 8 9

17) How much teaching time did you devote to the use of the kit?

a) ☐ 1 or 2 lessons
b) ☐ A week of lessons
c) ☐ 2 weeks of lessons
d) ☐ A month of lessons
e) ☐ Other (Please describe)

_____ x 1 2 3

_____ 4 5 6

_____ 7 8 9

18) Were any parts of the kit particularly useful? *(Tick more than one box if required)*

a) ☐ Resource Books
b) ☐ Activities
c) ☐ Posters
d) ☐ Video
e) ☐ Helping Hands
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

Comment

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

19) Over all, was the resource easy or difficult to use?

a) ☐ Very easy
b) ☐ Quite easy
c) ☐ A little difficult
d) ☐ Very difficult

Comment

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

20) How did students react to the activities/resources used from the kit?

a) ☐ Very well
b) ☐ Quite well
c) ☐ Not very well
d) ☐ Poorly

Comment

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

21) Do you have any suggestions for improving the content of the kit?

_____ x 1 2 3 4 5 6 7 8 9

_____

_____

22) Will the kit be used again in future years?

a) ☐ Definitely
b) ☐ Probably
c) ☐ Doubtful
d) ☐ Definitely not

23) How did you find out about the kit?

_____ x 1 2 3 4 5 6 7 8 9

_____

_____

24) Did you attend a regional launch for the kit?

a) ☐ Yes
b) ☐ No

If you answered "no" to question 24, please move on to Question 28.

25) What aspects of the launch did you find helpful/worthwhile?

_____ x 1 2 3 4 5 6 7 8 9

_____

_____

26) What aspects of the regional launch do you feel could have been improved?

_____ x 1 2 3 4 5 6 7 8 9

_____

_____

27) How did you report back to other staff at school about the regional launch?

a) ☐ Full staff meeting
b) ☐ In-service training day
c) ☐ Departmental staff meeting
d) ☐ Informal discussion
e) ☐ Did not report back
f) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

If you attended a regional launch of the kit, and have completed the questionnaire to this point, you have finished, and thank you! Please return the questionnaire to NZCER in the envelope provided. Remember, those schools that return their questionnaires by Friday 20 November will receive a free gift; see the covering letter to the Principal of your school for details of the free gift.

28) Did anyone at your school attend a regional launch of the kit?

a) ☐ Yes
b) ☐ No
c) ☐ Not sure

29) If you answered "yes" to Question 28, was there a "report back" by staff attending?

a) ☐ Yes
b) ☐ No
c) ☐ Not sure

30) If you answered "yes" to the above question, what form did the "report back" take?

a) ☐ Full staff meeting
b) ☐ In-service training day
c) ☐ Departmental staff meeting
d) ☐ Informal discussions
e) ☐ Other (Please describe)

_____ x 1 2 3
_____ 4 5 6
_____ 7 8 9

Thank you for completing this questionnaire. Please return it to NZCER in the stamped addressed envelope provided. Don't forget that schools who return their questionnaires to NZCER by Friday 20 November will receive a complimentary gift; see the covering letter to the Principal for details of this gift.

APPENDIX C

Comparison of National and Sample School Characteristics

Table C.1

National and Sample Distribution of Primary and Intermediate Schools According to Roll Size

Roll size	national %	sample %	sample no.
Under 80	37.0	20.0	46
Between 81 and 120	10.0	7.0	16
Between 121 and 300	34.5	40.0	93
Between 301 and 450	14.0	22.0	51
Over 450	4.5	11.0	26

Table C.2

National and Sample Distribution of Secondary Schools According to Roll Size

Roll size	national %	sample %	sample no.
Under 100	13.5	0.0	0 (1)
Between 101 and 300	18.0	3.0	2 (4)
Between 301 and 600	25.0	21.5	14 (3)
Between 601 and 800	16.0	18.5	12 (2)
Over 800	27.5	57.0	37 (4)

Table C.3

National and Sample Distribution of Primary and Intermediate Schools According to School Type

School type	national %	sample %	sample no.
Contributing Primary	40.0	45.0	104
Full Primary	51.0	24.0	56
Intermediate	6.0	29.0	67
Area School	3.0	2.0	5
Form 1 - 7	-	-**	-

** Form 1 - 7 schools are not represented in the primary sample, instead they are included in the secondary sample.

Table C.4

National and Sample Distribution of Secondary Schools According to School Type

School type	national %	sample %	sample no.
Form 3 to Form 7	63.0	83.0	54 (8)
Form 1 to Form 7	21.0	12.5	8 (3)
Area School	16.0	4.5	3 (3)

(The figures in brackets represent the launch sample)

Table C.5

National and Sample Distribution of Primary and Intermediate Schools According to School Ownership

School ownership	national %	sample %	sample no.
State	87.0	91.0	211
Integrated	8.0	6.5	15
Private	5.0	2.5	6

Table C.6

National and Sample Distribution of Secondary Schools According to School Ownership

School ownership	national %	sample %	sample no.
State	73.0	83.0	54 (7)
Integrated	15.0	9.0	6 (4)
Private	12.0	8.0	5 (3)

(The figures in brackets represent the launch sample)

APPENDIX D

Comparison of Primary Response Sample and National Characteristics

Table D.1

School Type of the Primary Response Sample in Comparison with the National Distribution

Type	sample %	responding %	no. responding
Contributing Primary	40.0	47.5	73
Full Primary	51.0	21.5	33
Intermediate	6.0	27.5	42
Area School	3.0	1.5	2
Form 1 - 7**	-	1.5	2
Other	-	0.5	1

** Although form 1 - 7 schools were originally included in our secondary sample, one form 1 - 7 returned a questionnaire from their intermediate section instead of secondary. This has been included in the primary analysis.

Table D.2

Distribution of Roll Size in the Primary Response Sample in Comparison with the National Distribution

Roll size	national %	responding %	no. responding
Under 80	37.0	19.5	30
Between 81 and 120	10.0	9.0	14
Between 121 and 300	34.5	34.5	53
Between 301 and 450	14.0	22.5	34
Over 450	4.5	14.5	22

Table D.3

Ownership of Primary Schools in the Response Sample Compared to the National Distribution

Ownership	national %	responding %	no. responding
State	87.0	91.0	139
Integrated	8.5	6.5	10
Private	4.5	2.5	4

APPENDIX E

Comparison of Secondary Response Sample and National Characteristics

Table E.1

Comparison of Secondary Schools in Response Sample with National Distribution According to School Type

Type	national %	responding %	no. responding
Form 3 to Form 7	63.0	79.5	43
Form 1 - 7	21.0	15.0	8
Area School	16.0	5.5	3

Table E.2

Roll Size of Responding Secondary Schools Compared to National Distribution

Roll Size	national %	responding %	no. responding
Under 100	13.5	-	-
Between 101 and 300	18.0	7.5	4
Between 301 and 600	25.0	20.5	11
Between 601 and 800	16.0	18.5	10
Over 800	27.5	53.5	29

Table E.3

Ownership of Responding Secondary Schools Compared to National Distribution

Ownership	national %	responding %	no. responding
State	73.0	74.0	40
Integrated	15.0	13.0	7
Private	12.0	13.0	7

APPENDIX F

Primary Questionnaire

List of Responses to Open-ended Questions, 9 14, and 19

Q9) If you answered "yes" to b) Will integrate the kit or parts of it into school or personal lesson plans - please describe the purposes for which you will use the kit.

We have the beginnings of a native bush/trees kit with lots of activities and ideas. These resources will complement each other.

There are plans in our area to develop a forestry port so this would be an appropriate unit of study for next year.

Native bush study is part of school charter.

As part of our forest/tree study - we work on a 2-year programme.

Science, environmental awareness.

Conservation, workers of New Zealand.

Not yet planned, but expect to plan more investigative experiments using "fair test" etc at Std 4 level eg best growing medium etc. Also perhaps survival. Will use much of the kit across social studies and science - possibly during conservation week (extending beyond this week).

Preparation for forestry field trip. Follow up to forest field trip. Learning centre activities.

Science study, including conservation (sustainable resource etc.).

Through a series of lessons on wider conservation issues.

One of the science topics of the school is "the bush". Also will use part of this to integrate into camp - the area we use has a pine plantation.

To cover topics - such as social studies - man and his interaction with the environment.

Identifying trees and insects. Display posters and pictures when appropriate. Use activity cards.

We would follow the lesson outlines primarily. The field visit to the nearest forest HQ is quite expensive for us due to distance (bus costs) and the cost they would charge the school.

Will use parts of the kit that are applicable to the biology section of the programme.

Probably as an adjunct to camp.

For a school topic on trees.

Supplement other info eg books, videos.

Whole curriculum approach through social studies, science, language, children's own experience.

Social studies/science/language/integrated environmental study.

As a valuable resource for a conservation unit.

Plan to study New Zealand forests - trees and fauna.

Environmental programme - incorporating conservation issues and integrating science, social studies, EOTC language, maths, health.

Could be any of these - conservation, native trees and animals, forestry as an industry, nga tamariki o tane (Maori perspective).

Science section - one of curriculum areas to be targeted next year, conservation.

Forestry, independent research.

Used as another resource for a language/science based interactive/integrated programme.

Used within the general topic of growing plants.

Conservation unit.

Will integrate ideas into own plans in a way to use resource to become more familiar with it. Plan to use forestry/wood unit as part of a 3-year cycle.

Will use part relevant to people who work in local forestry.

I may use it in a topic called forests but if I was implementing any other unit that was related to it I'd use it as a resource. I would use the lesson outlines as a resource for ideas and change them to make them more relevant to my class.

Trees/conservation.

In science - ecology, study of plants and project topics.

For form 2 use relevant material and link it to my current unit work and field studies of native bush. Form 1 - are likely to make more direct use of the lesson outlines with their pine plantation studies.

Looking at the environment. Environmental interaction.

Q14) If you answered "yes" to b) Integrated the kit or parts of it into school or personal lesson plans - please describe the purposes for which you used the kit.

So children are aware of what happens to a forest throughout its life and other life cycles etc that revolve around it.

Used information as a resource for learning centre.

Used some activity ideas as part of learning centre.

Mainly as a science/social studies based unit but integrated into all areas. Suitable as starters for individual learning centres.

To stimulate interest and language.

Did an integrated study of the forest which included a trip to the forest. Used heaps of ideas from the kit. Set up a learning centre in class. Did a drama session which involved holding a forestry meeting with whole class dressing up.

A big display assembly presentation to school, as part of conservation week.

To guide pupils on $ value of forest/conservation and balance of nature/world needs; resources vs axe and fire vs homes.

Conservation/science/trees.

In relation to conservation; composition of water, burning of/how forests etc affects the ozone layer/us in the long term.

I am sorry to disappoint you but there are no pine trees or plantations anywhere near my school so I have used parts out of the kit for a study of New Zealand native trees and also in conjunction with the plant growing unit supplied by a local Rotary Club which my class is looking after.

As a resource and pictorial aids to other units eg weather, comparison to mountain environment, opossums.

Social Studies unit on rain forests and endangered animals the kit was used in a support role to highlight New Zealand forest - mainly activity cards for independent activities.

Sole charge school so extracted activities and areas of work to suit purpose.

Used the kit generally as outlined but integrated more language into it.

General resource for subject areas eg language art etc.

A week-long whole-school study was planned and implemented to coincide with trees and forests week 1st term. The junior and standards kit was used as a basis for the study.

The kit was used for one integrated unit on "the forest" and its importance to our town.

Thinking about trees as; a renewable resource, a recreational resource, living things, part of our world.

Part of oral and written language. Supported techniques of planting 10 shade trees supplied by the local Lions club.

As a activity based unit, children chose own activity they want to do while I assist them when needed - plus a sharing time of what they have done.

Set up as a learning centre. Used photos around classroom referring often to them.

Integrated into own "wood" study.

Integrated elements of the kit into a cross-curricular unit based on the forest and conservation of indigenous forests.

Used in conjunction with trip to bush.

Used as part of social studies, added on reading skills, maths and language.

Wrote a plan around the box and its contents - followed outlines in kit.

Put it into own lessons plans - wood unit etc.

A syndicate of teachers used the kit as a major resource for an integrated study on bush and forests.

Both independent and group lessons. Resource for children and teachers.

As a resource for ideas and information.

To coincide with the schools forestry project.

As an integrated part of our conservation study and field trip to Wellington Zoo and the Botanical Gardens WWF centre.

Lessons on conservation.

Combined with school scheme.

Great resource to select activities for children - too many activities for one unit.

Extra work using activity cards for pupils who complete reading/writing early.

We chose different parts of the kit to fit with the themes being studied eg. at one time it was looking at people who work in the forest, another time to study the life cycle of pine trees.

Used pictures as motivation for art works and to emphasise the growth of plants and conservation.

Used as part of conservation theme.

Q19) Do you have any suggestions for improving the contents of the kit?

I enjoyed using the material and found the children responding and were interested. Would need to use it more before I could make suggestions for improvement.

Video? Slides?

Laminating covers for extended use - prolong life.

Survival game re: plants/insects/i.e. recycling forest.

More posters for wall displays - pictures tell a 1000 messages.

Perhaps a section on fossilised trees.

More posters.

No, happy with the kit. A video.

Possibly expand kit - or produce a kit similar in format dealing with aspects of native trees/forest and animals both native and introduced.

No it was terrific.

Bilingual format.

In our school of 4 syndicates it would have been useful to have 4 kits as they are worthwhile and very easy to follow.

Very high standard - it would be picky of me to improve it.

We would have liked more copies of the picture packs.

No.

Some of it was a bit difficult for junior classes - perhaps the activity cards might be graded so there are some easier ones.

No!

Some more science-based activities and ideas for outdoor education activities. At intermediate level most classes experience outdoor activities and some ideas for teachers would be helpful. Few contacts in the Helping Hands section of the manual in the Manawatu region.

Layers of native forest.

Bigger activities cards - less info on them. More varied approach to topic. Large coloured activity cards showing realistic illustrations/photos.

No.

No!

We will need more of the posters if we use the kit across the syndicate again.

Needed more sets of picture cards, activity cards, posters if more than one class doing the study at the same time for use in

centres. Video of sawmill/plantation life cycle.

Comparing types of forest - native, plantation.

Lack of balance between short- and long-term activities. More short term needed.

Possibly include posters from other levels. I appreciate that this would add to the production costs.

Not really.

I did not feel there was enough research material for F1 and 2 children. I prefer the solid info in the 4 booklets produced by NZFS 1982 (Plantation Forest of New Zealand) for this age level.

APPENDIX G

Secondary Questionnaire

List of Responses to Open-ended Questions 11, 16 and 21

Q11) If you answered "yes" to b) Will integrate the kit or parts of it into school or personal lesson plans - please describe the purposes for which the kit will be used.

Global pattern of forestry (Form 5). Forestry processing (Form 7). Forestry - environmental conservation issue (Form 6).

Personal resource/research (initial resource).

Illustrated ecological principles and environmental concerns etc.

May use it for other levels. May omit some material from lessons. Will follow some lesson outlines in the kit.

F6 biology plant topics.

Used in relation with biology field studies camp and ecology topic of SFC biology course. Some aspects to be included in "living things" topic (F3).

F6, level 3 - as a case study for trade section. F7, level 4 - as a case study for demand elasticity.

Will use it as a resource for graphics and technology - New Zealand theme important.

Further detail to existing programme.

Divide between graphics and workshop.

Analysis of elements, interactions, systems at F7 level.

Will integrate into F4 conservation topic. F5 local issue - geography and F6 forest landscapes topic.

Economics of forestry in New Zealand.

F7 geographical environment study (possum damage). F6 landscape studies. Forestry landscapes in the South Island.

Graphics or statistics.

As a student resource - for independent use.

I am not personally involved in 1993 topics.

Social studies programme/F4 level: aspect titled "People and Resources". Possibly F7 geography as part of a planning exercise.

For related technology in the F3-F5 levels.

Integrate into the environmental topic in social studies.

Focus on local studies.

Some relevant sections will be used in F4 graphics and design/TD programme.

F3 plants topic. F6 biology - ecology and plants. Senior work?

As a resource in the new F5 economics syllabus (producers and production section). As one of a variety of resources in F6 syllabus on economic growth.

F6 ecology probably.

F7 resource management topic. F5 used GIS poster.

Maori use of forest pre-European. Current issues - conservation/milling/tourism.

Graphic design units at F4 and F6 level.

Resource in F5 under renewable resources.

F6 economics - trade/growth sections.

Q16) If you answered "yes" to b) Integrated the kit, or parts of the kit, into school or personal lesson plans - please describe.

F5 geography studies forestry as a renewable resource we -
1) study planting, pruning in the Mahurangi Forest, Warkworth.
2) On a field trip to Rotorua study milling trees in the forest and saw mills/pulp and paper mill at Tasman Pulp and Paper.

Used the section on cloning trees to amplify plant propagation.

Integrated into an assignment for F3 on the forest.

F7 planning and decision-making topic: used two exercises from planning and decision-making section of geography book. Used GIS poster for analysing relationships. Used decision-making exercise on "greenhouse effect" (in conjunction with other resources from other sources) for the current geographical issue section of F7 geography.

F6 and F7 research topics.

General use in class programmes, students' research, information and assignments.

As part of project work.

F7 biology - greenhouse effect, biological controls. F7 geography - tourism/beech studies.

Used in conjunction with other resources and parts prepared for work sheets when teacher absent. At different times of the year integrated into junior science, biology F6, agriculture and forestry.

New Zealand forestry used for workshop technology wood. Several sections used for graphics - mainly F7.

Used the resource material to supplement material presently used on various topics throughout the year. Colleague has made up a unit for junior science.

Integrated into F4 Treaty of Waitangi, statistics. Used in F5 resources etc.

The statistics of the economics resource book integrated into lesson plans at senior level.

Social studies - Maori component and statistics. Geography - mapping and land use and statistics.

As background resource material - as follow up to coverage of erosion problems on East Coast and possible solutions.

Incorporated it into the syllabus (F3 and F4 mainly).

Used diagrams/part of the activities.

Inquiry learning - if selected as a theme for study by a research group. F3 conservation.

Used information from the kit. Showed the video and expanded on it.

Looking at the forest community.

Related it to conservation topic in social studies.

In social studies classes used the kit with the F4 unit - resources and their use - the kit was used for student research.

The video was used as an introduction to farm forestry (as a reason for diversification and environmental protection).

Tree-planting exercise for trees and forests week.

Used as resource material for organisms and environmental section. Will be used next week in F6 bio-ecology.

I used section of the kit for a couple of lessons related to Arbor Day and Conservation Week.

As part of research skills and conservation.

"Productivity" activity utilised in F6 employment topic.

Forestry as an industry for the West Coast - land use and employment. Field trip, poster activities.

Project on forestry as part of a F5 science plant unit.

<u>Q21) Do you have any suggestions for improving the contents of the kit?</u>

No it appears very professional in standard.

Not at all.

Inclusion of graphics and design would be very useful.

Looks okay.

More raw data in geography book (tables for processing). Impact of another example similar to the size of nearby forests would make it more relevant to F5.

At a senior level F5, 6 and 7. More specific details on management methods etc, propagation: such that students could try methods. It would also be very useful for a 3-7 high school to have a copy of F1/2 particularly for our less able students to work through.

As already mentioned the addition of horticulture and agriculture booklets, videos and posters.

More interactive activities in the science/biology sections.

More for free.

More visuals - slide set?, OHP's in colour. Bigger, better video tape in sections.

Project/study guides based on booklets would be useful.